REF
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Neighborhood Meeting
50 Tufts Street

Ileen Gladstone, P.E., LSP
September 17, 2007

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LOCAL
HISTORY

SOMERVILLE PUBLIC LIBRARY
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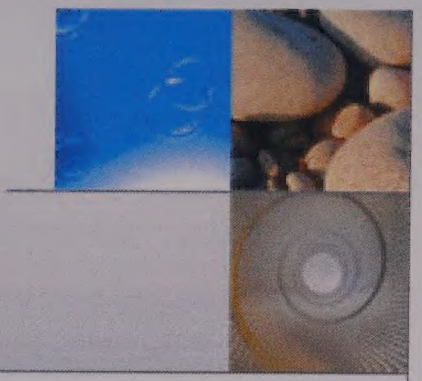
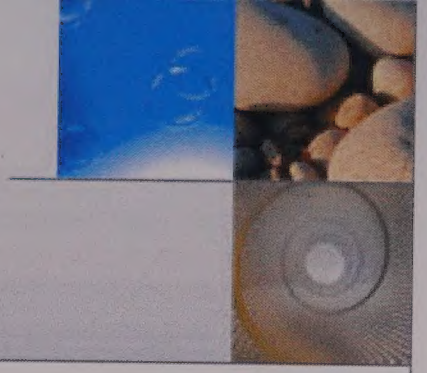
Agenda



- Regulatory Status
- Summary of Phase II Testing
- Update of Evaluation of Nearby Residences and Buildings
- 50 Tufts Street
- Capuano Early Childhood Center
- Next Steps

Massachusetts Contingency Plan Process



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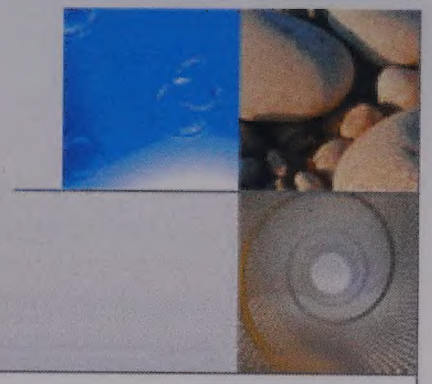
- State statute (Chapter 21E) delegates authority over site investigations and cleanups to DEP
- DEP issued detailed legal and technical regulations called Massachusetts Contingency Plan (MCP)
- DEP established licensing program for environmental scientists and engineers to qualify as Licensed Site Professionals (LSPs)
- An LSP must conduct investigation and certify compliance with MCP to DEP at each step of process
- At this Site DEP is participating in and directly overseeing the investigation and cleanup

Massachusetts Contingency Plan Process



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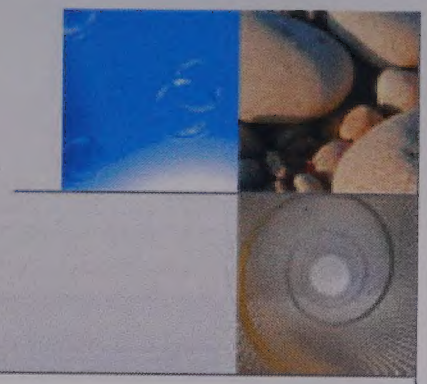
- MCP process moves logically through phases, from initial reporting and investigation of site conditions, to detailed scientific evaluation necessary to determine available and appropriate engineering solutions
- Completed Phase I Investigation and Report
- Conducting Immediate Response Actions (IRAs) to address potential migration of vapor into nearby buildings
- Conducting Phase II activities to determine extent of contamination in groundwater
- UniFirst and the City are holding regular meetings to keep the community informed concerning the progress of the MCP process
- This is another informational meeting concerning a State-run process

Summary of Phase II Testing Results



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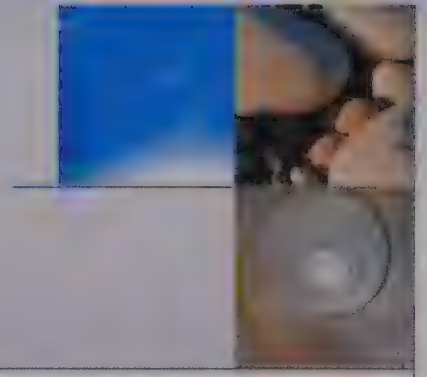
- Expanded the evaluation area
- East of Washington Street
- North of the Capuano School

Summary of Phase II Testing Results

- Expanded the evaluation area
  - East of Washington Street
  - North of the Capuano School

Expanded Evaluation Area



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Residences and Buildings Evaluated

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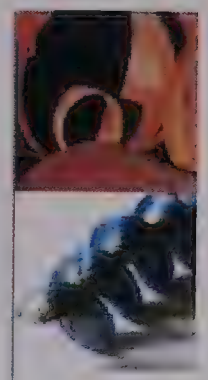

Evaluation Process

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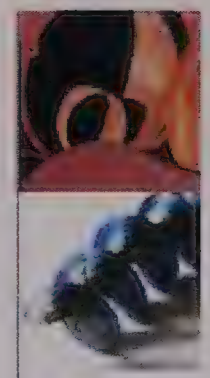

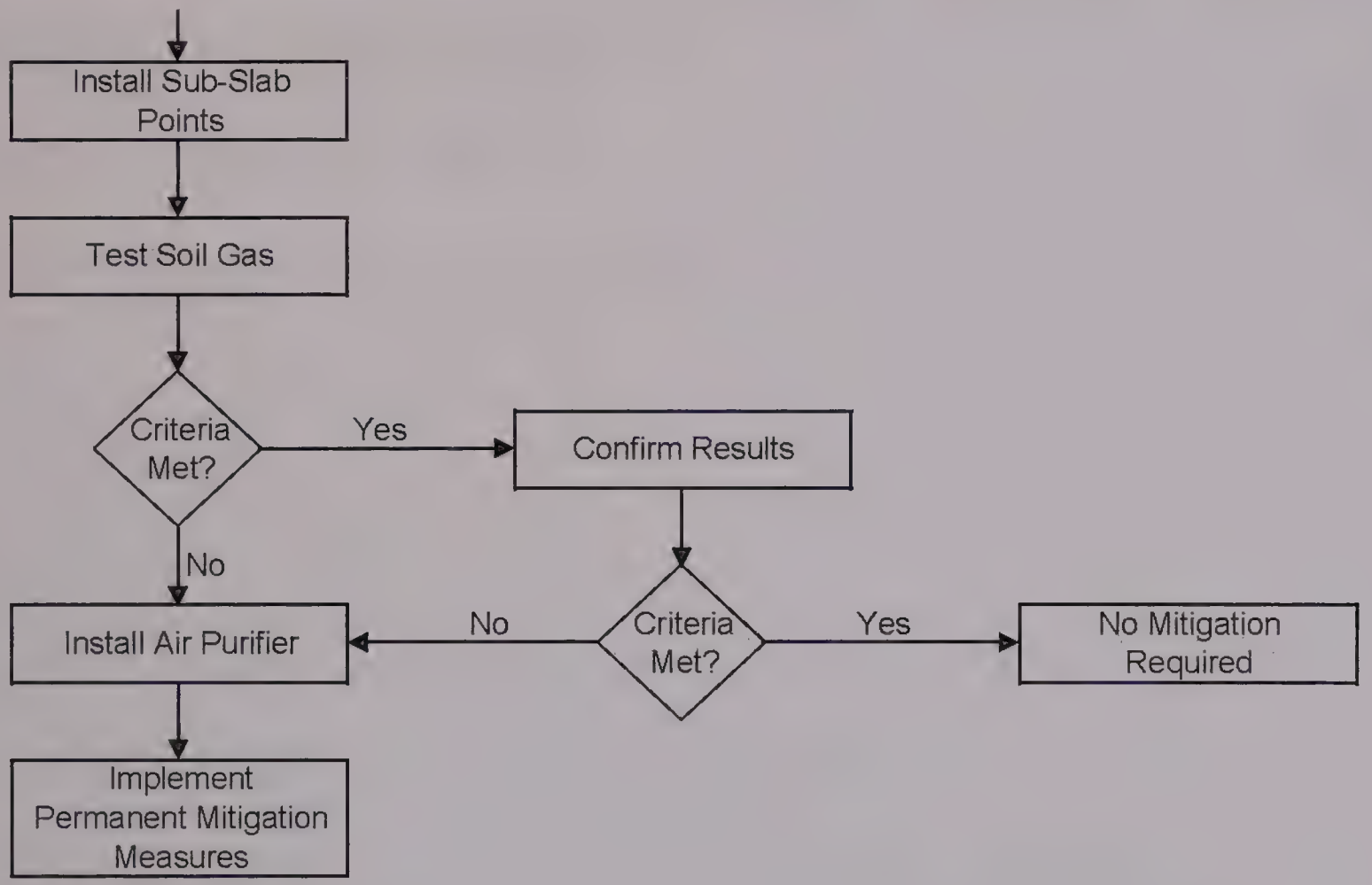

Status of Evaluation

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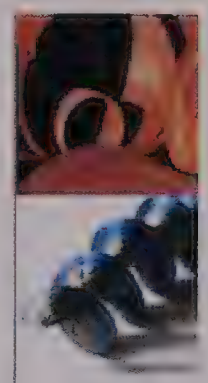
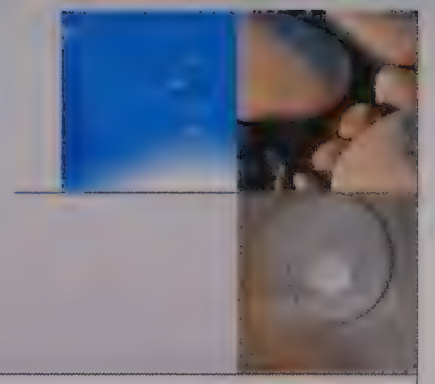


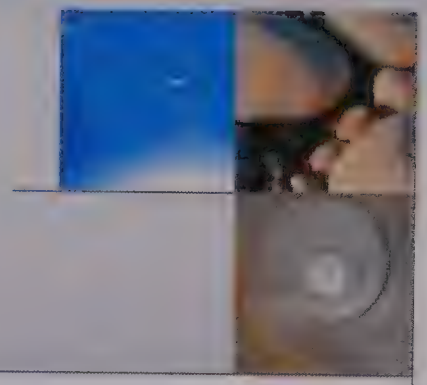
- Mitigation required
- Mitigation likely not required
  - Confirmation indoor air testing
- Additional Assessment required

Statistics for the Study Area



- Residences and Buildings within Study Area: 71
- No Contact Information: 4
- Contacted: 67
  - Sub-Slab Sampled: 56
  - Previously Evaluated: 6
  - Refused Sampling: 5
- Mitigation Recommended: 26
  - Mitigation Pending: 15
  - Mitigation Installed: 9
  - Refused SSDS: 6
- Continued Assessment 25
- Mitigation Likely Not Required:

Types of Mitigation



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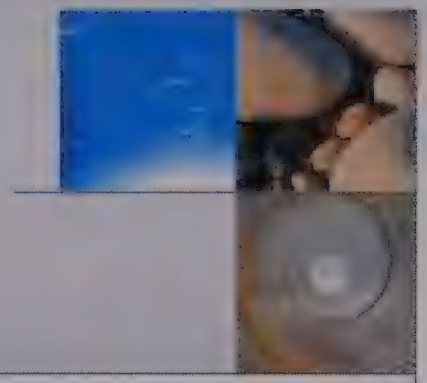
- Subslab Depressurization System
  - Concrete floors and walls
  - Good sub-slab communication
- Sealing Walls and Floors
  - Poor quality concrete floors or dirt floors
  - Fieldstone foundations
  - Poor sub-slab communication

VAPOR MITIGATION PROCESS



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IDENTIFY | **EVALUATE** | **IMPLEMENT** | **CONFIRM**

INDOOR AIR SAMPLING

VAPORS DETECTED?

YES

BASEMENT INSPECTION

NO

INDOOR AIR SAMPLING

VAPORS DETECTED?

YES

NO

1 ACTIVE VENTING SYSTEM

OR

2 VAPOR BARRIER EPOXY FLOOR & WALLS PASSIVE VENT

OR

3 VAPOR BARRIER EPOXY WALLS FLOOR MEMBRANE PASSIVE VENT

CONFIRMATORY INDOOR AIR SAMPLING

NO FURTHER ACTION REQUIRED

Sub-slab Depressurization System

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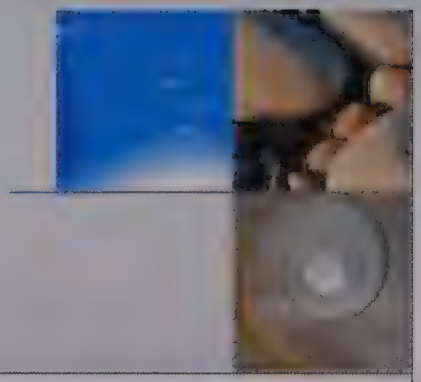
- Confirm good sub-slab communications
- Install one to two extraction point in the basement floor
- Install piping through an exterior basement wall
- Connected piping to a fan (blower)
- Vent above roof line

Sub-slab Depressurization System



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Concrete Floor & Fieldstone Foundations

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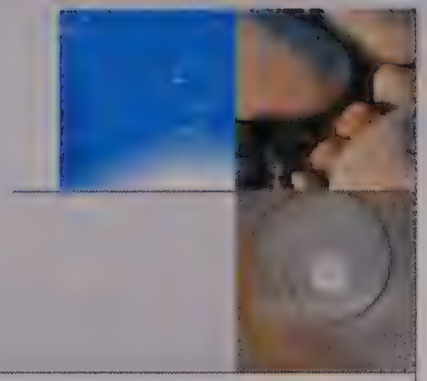
- Leveling concrete
- Applying vapor barrier epoxy
- Top coat of floor leveler
- Perimeter vapor trench at floor and wall joint
- Re-point foundation
- Apply drainage plane
- Install rubber vapor membrane on the walls
- Wire mesh and stucco

Concrete Floor & Fieldstone Foundations



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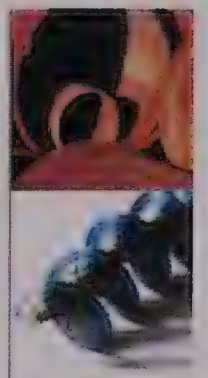
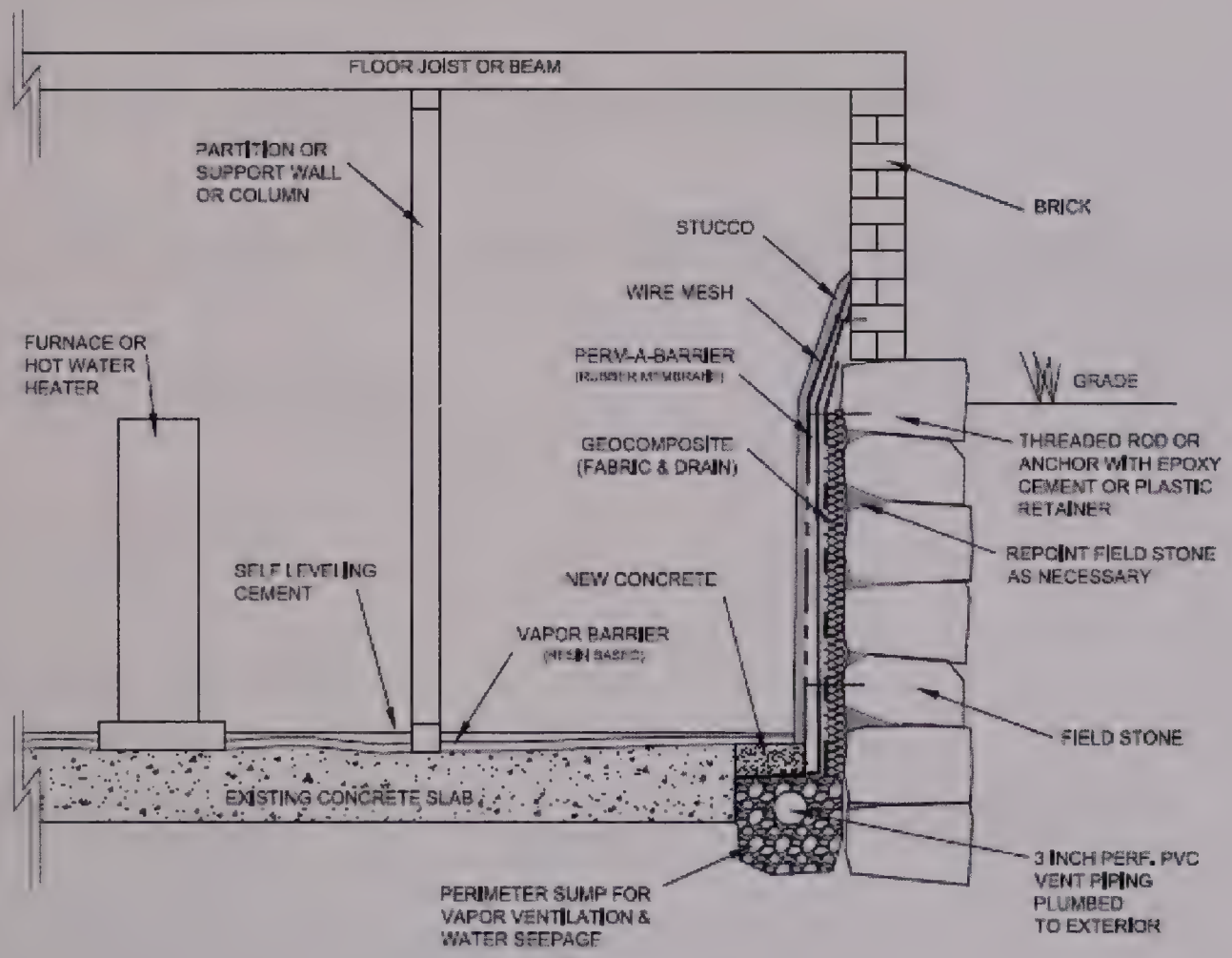
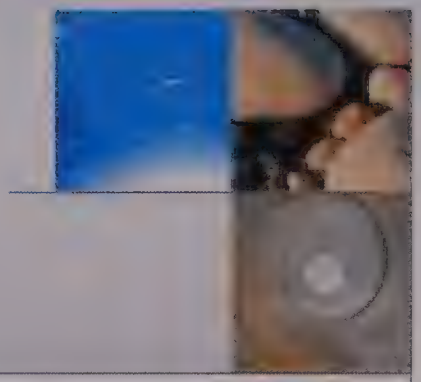




No Floor or Poor Quality Floor



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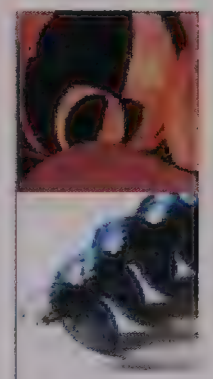
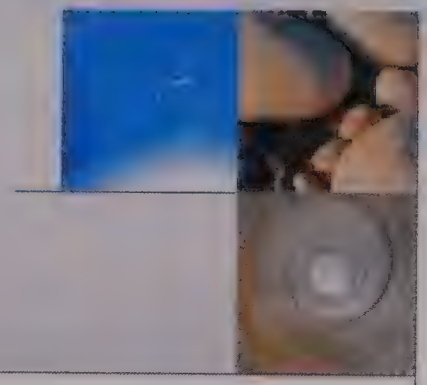
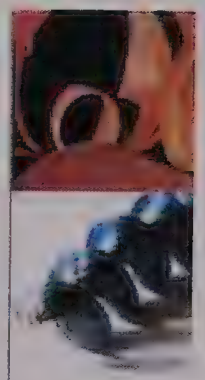
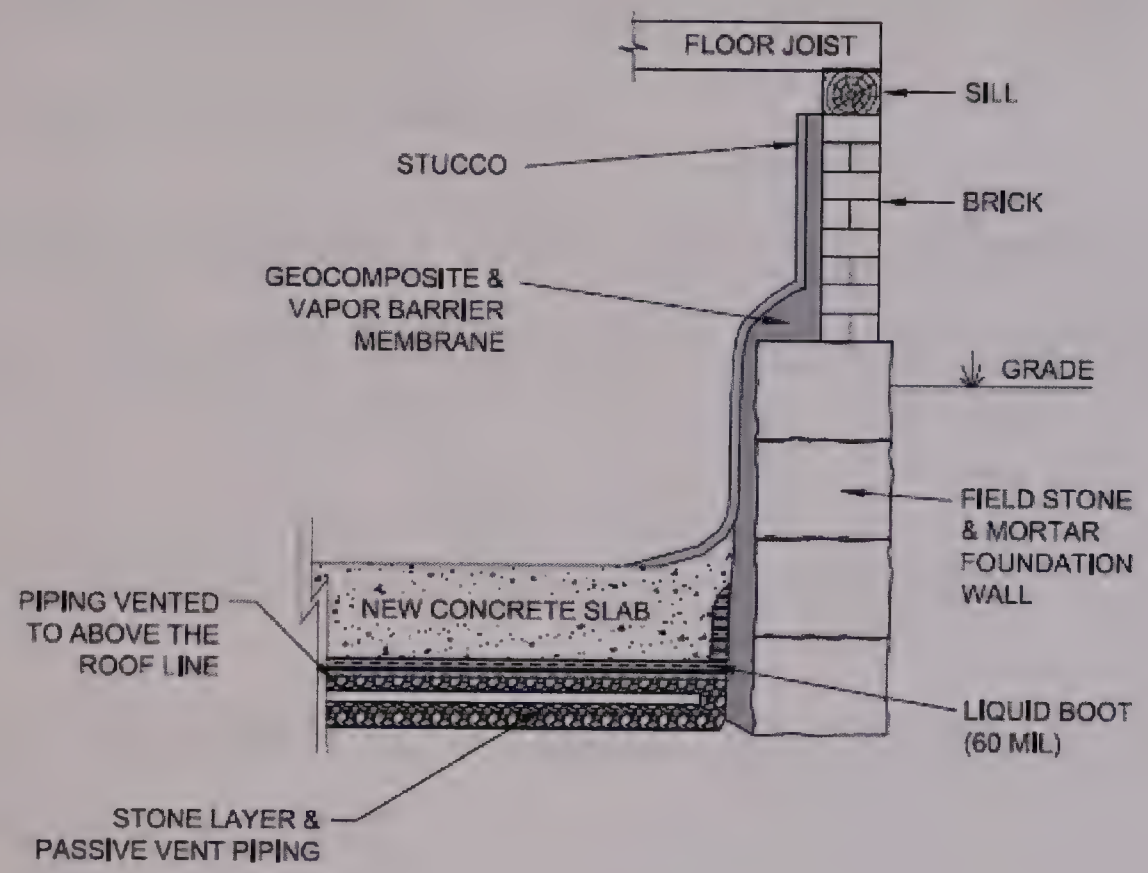


- Removing poor concrete
- Install stone and passive vent system
- Applying vapor proofing membrane to ground surface
- Pour new concrete slab
- Re-point foundation
- Apply drainage plane
- Install rubber vapor membrane on the walls
- Wire mesh and stucco walls

No Floor or Poor Quality Floor







50 Tufts Street

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- Building currently vacant but Somerville Two is preparing it for re-occupancy.
- UniFirst installed subslab depressurization system (SSDS) and soil vapor extraction (SVE) system beneath building.
- Collected gas treated before discharging.
- Expanded SVE system to clean up contaminated soil outside building footprint.

Capuano Early Childhood Center

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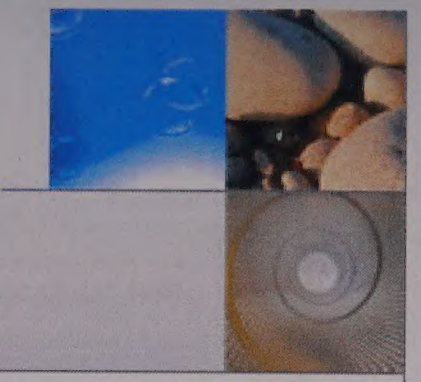
- Installed Sub-Slab Depressurization System
- Monitored throughout the school year: non-detects in classrooms
- Upgraded system in August by sealing joint between floor and walls in classroom wing.
- Continue monthly sampling at Center

Next Steps



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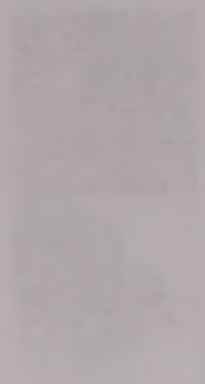
- Continue evaluation in study area
- Install mitigation systems as data indicate
- Continue monitoring SSDS at Capuano Center to confirm effectiveness of mitigation measures
- Continue to investigate and map subsurface contamination



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